

WHAT IS CLAIMED IS:

1. A tape substrate comprising:
an insulating film;

5 a copper foil pattern formed on the insulating film at
one side of the insulating film, and provided with a
connecting area where an electronic element is to be mounted;

 a barrier layer plated on the copper foil pattern at the
connecting area, and formed with a plurality of pores; and

10 a tin layer plated on the barrier layer, and alloyed
with a portion of the copper foil pattern corresponding to the
connecting area, through the pores.

 2. The tape substrate according to claim 1, wherein the
15 barrier layer is made of a compound containing gold and silver
as major components thereof.

 3. The tape substrate according to claim 2, wherein the
compound of the barrier layer further contains an additive of
20 Se or Pb.

 4. The tape substrate according to claim 1, wherein the
barrier layer has a pore density corresponding to less than 95%
of a surface area of the copper foil pattern.

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5. The tape substrate according to claim 1, wherein the barrier layer has a thickness of 0.01 to 1 μ m.

6. The tape substrate according to claim 1, wherein the tin layer has a thickness of 0.01 to 1 μ m.

7. A method for fabricating a tape substrate, comprising the steps of:

(A) forming, on an insulating film, a copper foil pattern having a connecting area;

(B) coating a solder resist on the copper foil pattern, formed at step (A), at a region other than the connecting area;

(C) plating a barrier layer on the copper foil pattern at the connecting area after the coating of the solder resist at step (B); and

(D) plating tin on the barrier layer plated at step (C), thereby forming a tin layer on the barrier layer.

8. The method according to claim 7, further comprising the step of:

heating the barrier layer and the tin layer after the plating of the tin layer at step (D), thereby alloying the barrier layer and the tin layer at an interface therebetween.

9. A method for fabricating a tape substrate, comprising

the steps of:

(A) forming, on an insulating film, a copper foil pattern having a connecting area;

5 (B) plating a barrier layer over the copper foil pattern formed at step (A);

(C) coating a solder resist on the barrier layer at a region other than the connecting area, after the plating of the barrier layer at step (B); and

10 (D) plating tin on the barrier layer at the connecting area after the coating of the solder resist at step (C), thereby forming a tin layer on the barrier layer at the connecting area.

15 10. The method according to claim 9, further comprising the step of:

heating the barrier layer and the tin layer after the plating of the tin layer at step (D), thereby alloying the barrier layer and the tin layer at an interface therebetween.

20 11. A method for fabricating a tape substrate, comprising the steps of:

(A) forming, on an insulating film, a copper foil pattern having a connecting area;

25 (B) plating a barrier layer over the copper foil pattern formed at step (A);

(C) plating tin over the barrier layer after the plating of the barrier layer at step (B), thereby forming a tin layer over the barrier layer; and

5 (D) coating a solder resist on the tin layer at a region other than the connecting area, after the formation of the tin layer at step (C).

12. The method according to claim 11, further comprising the step of:

10 heating the barrier layer and the tin layer after the plating of the tin layer at step (C), thereby alloying the barrier layer and the tin layer at an interface therebetween.

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